EPONYMS OR DESCRIPTIVE EQUIVALENT TERMS? THE QUESTION OF SCIENTIFIC ACCURACY IN MEDICAL DISCOURSE

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Abstract

A large part of medical lexicon is made up of eponymous terms. These have often been an object of debate and disagreement among specialists and linguists. More precisely, some claim that eponyms should be maintained, while others are inclined to substitute them with descriptive equivalent terms. The aim of this work is to highlight the importance of linguistic accuracy in medical communication through the analysis of the main advantages and disadvantages involved in both the use of eponyms and descriptive terms.
The work is divided into four main parts. The first part provides a classification of the various types of medical eponyms, according to the types of names they can include. The second part is an examination of the current controversy about eponyms, with a discussion of the main reasons in favour of and against their use in medical discourse. The third part focuses on positive and negative pragmatic aspects in the use of eponyms in medical discourse, while in the fourth and last part attention is paid to the inaccuracy of some descriptive denominations[1].

1. *Introduction*

Despite the debate on whether eponyms should be part or not of medical scientific language, these kinds of terms are still largely used in both written specialized discourse and in spoken communication for two main reasons: they give renown to physicians, and represent a useful linguistic means to convey complex medical concepts in a very concise way.
Eponyms have also been the focus of great attention by lexicographers, as important dictionaries have been published on the subject over the years. *Jablonski's Dictionary of Syndromes & Eponymic Diseases* (1991), the *Dictionary of Medical Eponyms* (2001), by Firkin and Whithworth, and the more recent *Stedman's Medical Eponyms* (2005) are among the most relevant works. There are also specific medical field related dictionaries like, for instance, *Stedman's Illustrated Dictionary of Dermatology Eponyms* (2004), which contains more than 1,000 entries. A complete and exhaustive database of medical eponyms is *whonamedit.com* (http://www.whonamedit.com/azeponyms.cfm/A.html), a constantly updated biographical dictionary where eponyms are also listed by category (e.g. anatomy, bone and joint, cardiovascular system, etc.), and daily updating about the latest entries is provided.

What is usually referred to as an "eponym" is defined by Crystal (2003:163) as "the name of a person after whom something (such as an invention or a place) is named". However, since the term *eponym* literally means "upon a name" (from Greek *epi* "upon", + *onyma* "name"), and consequently there is no reference to whether the name is "proper" or "common", nor to whether it refers to a person, thing or place, in this study not only terms containing proper names of people (real or fictitious) but also proper names of places (toponyms) as well as common names in general will be considered eponyms in all respects.
The traditional classification of eponyms is by the semantic content of the headword which follows the proper name. Headwords can designate pathological conditions (e.g. *Pellegrini's disease*),

[1] The corpus used for this work is represented by the specialized medical dictionaries referred to in the introduction and included in the references.

groups of symptoms which occur together (e.g. *Alder's syndrome*), injuries (e.g. *runner's knee*), medical equipment (e.g. *Beck's cannula*), anatomical structures (e.g. *Gartner's canal*), theoretical knowledge (e.g. *Golgi's law*), laboratory examinations (e.g. *Kober's test*), techniques (e.g. *Neumann's method*), microorganisms (e.g. *Abel's bacillum*), and drug-induced conditions (e.g. *Southworth's symptom complex*).
In this study, an additional classification of medical eponyms is suggested according to the type of name, "proper" or "common", which precedes the headword. Names can be:

1. proper names of people who have studied a particular disease or condition (e.g., *Down's syndrome*);
2. common names of professions (e.g. *coal miner's knee*) or classes of individuals (e.g. *housemaid's knee* or *golfer's elbow*);
3. names of literary characters (e.g. *Oedipus complex*);
4. toponyms (e.g. *Murray Valley encephalitis*);
5. proper names of patients who have suffered from a particular disease or condition (e.g. *Christmas disease*)[2].

2. *The debate on the appropriateness of eponyms in medical language*

Physicians, linguists and writers have all along disagreed over the appropriateness of eponymous terms in both written and spoken medical discourse. In particular, some maintain that eponyms should be part of scientific literature because they represent the only means to celebrate people who have made important discoveries or described a specific disease. Others claim that eponyms should be abandoned because they are obscure, inaccurate, and give no information other than historical. Both sides of the controversy in question and the main reasoning supporting each of them will be discussed hereafter.
One of the main reasons supporting the maintenance of eponyms in medical language is their power to give honour and merit to a person who would otherwise be forgotten. Physician Benjamin Barankin (2005:134) says:

> We should be promoting the use of eponyms and the development of new eponyms so as to continue to enrich our language and to honor the legacy of those dedicated souls who have catapulted our specialty to amazing heights. […] Eponyms encourage us to learn and /or research the creative genius of our predecessors, and ensure that their unique brilliance is not forgotten."

Another reason given in favour of the use of eponyms in medical language is their power of conciseness. Physicians Hunter *et al.* (2000) state that "when there is an accurate understanding of their meaning, eponyms are valuable shorthand, since they convey a good deal of specific information in an abbreviated way". The higher level of conciseness that eponyms have in comparison with their equivalent descriptive terms is vigorously underlined by Whitworth (2007) who, besides highlighting the importance of eponyms as the only way to "embed medical traditions and cultures to our history", also writes:

> Eponyms are often practical and a form of medical shorthand. Do we really want to speak of congenital cyanotic heart disease due to ventricular septal defect, pulmonary stenosis, right ventricular hypertrophy, and aortic dextroposition rather than Fallot's tetralogy? Or hereditary disorder of renal tubular function with vitamin D resistant renal rickets, glycosuria, aminoaciduria, and hyperphosphaturia for Fanconi syndrome? Or violent muscular jerks of the face, shoulders, and extremities with spasmodic grunting, explosive noises, or coprolalia instead of Tourette's syndrome?

[2] Eponymous diseases named after patients are currently few. Besides *Christmas disease*, other cases are *Lou Gehrig's disease*, *Hartnup's disease* and *Mortimer's disease*.
This work will not deal with the ways the English language forms eponyms. For investigation about this aspect, see Dirckx (2001).

On the opposite side of the controversy there are those who suggest the deletion of eponyms from medical language and their substitution with descriptive terms.
Scholars Duque-Parra and Llano-Idárraga (2006: 219) state that eponyms "do not provide any clear information leading to the identification of the situation under study, as they are not reasonably descriptive". With particular reference to the lack of appropriateness in medical eponyms, attention should be paid to a research carried out by scholars Keynan and Rimar (2008: 256) on the eponym *Reiter's syndrome*. The authors suggest abolishing the eponym in question from use in medical literature and replacing it with the more appropriate term *reactive arthritis*. They say:

> We believe that the eponym should be deleted from the medical literature and replaced by the term reactive arthritis for several reasons. Firstly, the triad described in this syndrome is too restrictive of the concept of reactive arthritis, which encompasses a great deal more and can be present even in the absence of all three components. Second, a more descriptive term than an eponym is preferred. Third, Reiter was not the first to describe the syndrome. Finally, and most important, is the moral issue. Despite this reasoning the term Reiter syndrome is still being used and there are few instances where it is mentioned with disfavor."

Physicians Woywodt and Matteson (2007) appeal to the history of the person behind *Reiter's syndrome*. The German doctor Reiter was discovered to be connected to Nazi atrocities and human experiments during World War II. The results of these revelations were an initial decline in the use of the eponym and the proposal to delete it from medical lexicon. Yet, "the facts about Reiter escaped the scientific community only because no one had investigated the person behind the eponym" (Woywodt and Matteson: 2007). The two physicians also consider the fact that eponyms usually carry the name of one person whereas scientific discoveries are often the result of the contributions of many people over time. They mention the case of *Behçet's disease*, an eponym which should incorporate the names of other 28 physicians in order to acknowledge all those who studied and described the corresponding disease.
According to Woywodt and Matteson (2007), eponyms "lack scientific accuracy, lead to confusion, and hamper scientific discussion in a globalised world." In a study carried out in the branch of cardiosurgery, they have found that there are a good 31 eponyms referring to signs and symptoms in aortic regurgitation. Woywodt and Matteson (2007) also discuss over two other phenomena related to the use of eponyms. One is the fact that there are diseases which have different eponyms in different countries, like "giant cell arteritis", which is known as *Morbus Horton* in Germany, and *Maladie de Horton* in France. The other concerns errors in the spelling that many eponymous denominations inevitably imply, as in the case of *Bechterew's disease* in Germany, which becomes *Bekhterew's disease* in other countries. Dirckx (2001: 21) ascribes these kinds of errors to the fact that many eponyms contain proper names of international provenance. With regard to this, the scholar mentions the cases of those eponyms which incorporate such names as *Chvostek*, *Hirschsprung* and *Kupffer*.
Finally, Waseem *et al.* (2005) uphold that the use of eponyms can sometimes be misleading - and so potentially dangerous - in scientific writing and in clinical practice as well. In a study carried out in the orthopaedic field of hand surgery on the eponym *Finkelstein's test*, the authors found out that the specialists who were contacted (consultant orthopaedic surgeons and specialist orthopaedic registrars) had given three different descriptions of the term. This was due to the fact that the eponym in question had been incorrectly referred to in scientific literature for over 50 years, with implications in both treatments and prognoses[3].

[3] Waseem *et al.* (2005) report that Finkelstein's test, a procedure used to diagnose De Quervain's tenosynovitis in people with wrist pain, was incorrectly described by Leao (1958) who quoted Eichhoff's manoeuvre as Finkelstein's test. The mistake was identified in 1992 by Elliott, who "explained the difference between Finkelstein's test and its commonly used variant that will produce similar pain by tendon stretching in a normal wrist".

3. *Other pros and cons regarding the use of medical eponyms*

It has been said that eponyms are claimed to possess an elevated power of lexical conciseness. If this is true in most cases, however there is also a substantial number of eponyms which are not concise at all, in that they are made up of even more than three proper names: *Morgagni-Shereshevskii-Turner-Albright syndrome*, *Bamatter-Franceschetti-Klein-Sierro-syndrome*, *Refsum-Thiébaut-Klenk-Kahlke disease* are only a few examples.
To make things more complicated, there are eponyms incorporating proper nouns next to the description of the disease or disorder. The result is the presence of rather long phrases which can be defined as 'hybrid eponyms', as they lie between traditional eponyms (proper noun + "disease" or "syndrome") and descriptive terms (diagnosis). The cases of *Siemens-Bloch-pigmented dermatosis*, *Axenfeld's posterior embryotoxon-juvenile glaucoma*, *Aran-Duchenne spinal muscular atrophy* serve as significant cases.
Moreover, the attribution of the merit for the discovery or description of diseases has quite often gone to a person who is not the one who actually first discovered or described them. *Familial benign pemphigus*, for instance, a chronic skin disorder, is believed to have been described first by the Hailey brothers in 1939, but the paternity of the first description is to be attributed to the French dermatologist Gougerot in 1933. Yet, the most common eponymous denomination to refer to the disorder is *Hailey-Hailey disease*, while *Gougerot disease* only exists together with *Hailey-Hailey* (*Gougerot-Hailey-Hailey disease*).
The use of eponyms in medical communication is likely to create confusion and ambiguity for many other reasons. One of these is the fact that since a physician may have described more than one disease, there are eponyms carrying the same name but referring to different diseases. The English physician Thomas Addison, for example, has given his name to several diseases or disorders, such as, for example, *Addison's anaemia*, *Addison's crisis*, and *Addison's disease*. There are also cases of eponyms containing the same name which, however, refers to different people - and to different conditions as well - as happens for *Smith's disease* (Carl), *Smith's operation* (Henry), *Smith's fracture* (Robert William). Even worse is the case of eponyms containing not only the same proper name - referring once again to different people - but also the same headword. Examples are *Alexander's syndrome*, where the proper name refers to two distinct people (Benjamin and William Stuart), or even the case of the four homonymous eponyms *Pick's disease* (Arnold, Friedel J., Ludwig, and Philipp J.).

4. *Descriptive terms for eponymic denominations: the equivalents of tennis elbow and golfer's elbow*

Unlike eponyms, descriptive medical terms provide information about the "object" which is designated (diseases, disorders, injuries, medical instruments, etc.). However, they do not always prove to be accurate in relation to the meaning they are used to refer to. Some examples come from sports-medicine language. Looking up the equivalent medical terms for the eponym *tennis elbow* in *McGraw-Hill* dictionary (1988), the following synonyms are registered: *radiohumeral epicondylitis* and *radiohumeral bursitis*. Virtually, neither the former nor the latter seem to be accurate as synonyms of *tennis elbow*. *Dorland's Illustrated Medical Dictionary* (2000) gives the following definition of *tennis elbow*: "a term often used for bursitis of the elbow but more accurately referring to tendinitis felt in the outer aspect of the elbow due to inflammation of the extensor tendon attached to the lateral humeral condyle". According to this definition, the kind of injury referred to

as *tennis elbow* is not an epicondylitis[4], since the inflammation does not concern the humerus epicondyle[5], nor is it a bursitis, as the inflammation does not concern the bursa[6] either.
The anatomical part which is affected by the inflammation is a tendon. As a consequence, "tendinitis" would be more correct than *epicondylitis* or *bursitis*. However, in order to understand what exactly the kind of injury called *tennis elbow* is, and, as a consequence, what its appropriate descriptive medical term *could be*, outcomes in the histopathological field should be considered. In an article about tennis elbow, the authors, physicians Kraushaar and Nirschl (1999), write:

> While the terms epicondylitis and tendinitis commonly are used to describe tennis elbow, histopathological studies have demonstrated that tennis elbow is not an inflammatory condition; rather, it is a fibroblastic and vascular response called angiofibroblastic degeneration, now more commonly known as tendinosis. [...] Thus, the terms epicondylitis and tendinitis are misnomers.

The non-inflammatory nature of tennis elbow injury is also mentioned in a previous work, written by physician Hammer (1992), where the terminological aspect is dealt with as well:

> Tennis elbow is more likely a tendinosis than a tendinitis. A lateral tennis elbow should be called epicondylosis. If we wanted to be even more correct, since the epicondyle is not inflamed, the word epicondyle should be omitted. Nirschl refers to epicondylitis as "lateral or medial tennis elbow tendinosis."

Yet, not even the denomination suggested by Nirschl[7] seems to be correct or, at least, not completely. The reason lies in the fact that in medicine there is another strain-related injury which is often mistaken for tennis elbow, i.e. golfer's elbow[8]. Golfer's elbow is a similar condition to tennis elbow, but in this case the affected anatomical part is the tendon on the medial epicondyle. For this reason the commonly used medical term for *golfer's elbow* is *medial epicondylitis*. In short, there is a difference between the sheer tennis elbow, (also called *lateral epicondylitis*), and golfer's elbow, (also called *medial epicondylitis*). Therefore, in the denomination "lateral or medial tennis elbow tendinosis" coined by Nirschl, the attribute "medial" should be omitted.

On the basis of what histopathological studies have highlighted about tennis elbow injury, a possible appropriate medical term could be 'lateral humeral periepicondylar tendinosis'. Similarly, to refer to golfer's elbow, the denomination 'medial humeral periepicondylar tendinosis' could be suggested.
Finally, a few words should be spent on the inappropriateness of the eponym *tennis elbow* itself. This eponym, in fact, is somewhat of a misnomer. Unlike what we might think, the majority of people who are affected by tennis elbow don't play any tennis. More precisely, it is estimated that of all people affected by tennis elbow, only one third is represented by regular tennis players. The remaining part is made up of other sports participants (e.g. fencers), and manual workers such as plumbers, painters, gardeners and carpenters[9].

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[4] The suffix *-itis*, of Greek origin, means "inflammation". For further investigations on the use of *-itis* and *-osis* in medical language, see Cappuzzo, *Arco-Journal*, http://www.arcojournal.unipa.it/pdf/cappuzzo_24_1_04.pdf
[5] The epicondyle is "an eminence on a bone upon its condyle" (*McGraw/Hill*, 1998). The condyle is "a rouded projection on a bone, usually for articulation with another bone".
[6] The bursa is "a small fluid-filled sac or saclike cavity situated in places in tissues where friction would otherwise occur" (*Dorland's Illustrated Medical Dictionary*, 2000).
[7] Quoted by Hammer (1992).
[8] *Golfer's elbow* has three synonyms, namely *baseball elbow*, *forehand tennis elbow*, and *suitcase elbow*. The kind of injury which is designated by all these denominations is commonly identified with such sportsmen as golfers, as well as with tennis players who put much strenght on their forehands shots, and with people who carry and/or lift heavy objects (e.g. suitcases).
[9] Data drawn from Cluett (2007).

5. *Conclusions*

Medical language is replete with eponyms. Although their use has often been criticized by many, no doubt extraordinary is their capability to encapsulate long and complex concepts very concisely. This is probably one of the main reasons why they continue to flourish in medical language. Both eponyms and equivalent descriptive terms can have positive and negative aspects. Eponyms can be tricky and confusing on a pragmatic level. They can be multiple, if they contain more than one name; homonymous, because headwords can be named after several people having the same last name; misspelled, because names may be difficult to pronounce and transcribe; inaccurate, as sometimes some of them are erroneously used as synonyms; obscure, as they are not descriptive (with the exception of 'hybrid' eponyms). Descriptive terms, on the other hand, give scientific information, and their use does not generally give rise to misunderstandings and semantic ambiguity. However, they can be inaccurate too, especially when they are not used in the meaning their surface form would suggest (e.g. the suffix *-itis* instead of *-osis*).
It is understandable that some branches of medicine should be against the use of eponyms in specialized communication. Anatomy, for example, is the descriptive medical science par excellence; it is not surprising that specialists in this specific field of knowledge are not inclined to adopt eponymic terms when describing living beings' physical structure. Eponyms contained in the *Terminologia Anatomica*, a corpus of anatomical terms - published by the Federative Committee on Anatomical Terminology (FCAT) in 1998 - are indexed next to their English equivalent terms. The aim of the work is that of providing worldwide reference terminology, which would also abolish national differences in the eponymic denominations of anatomical structures.
Generally speaking, the recourse to eponyms should be avoided unless they are well-known, such as, for example, *Alzheimer's disease* and *Parkinson's disease*, denominations which have also been absorbed into common language. Descriptive terms should be preferred to eponyms, providing that the former are accurately used. Incorrect descriptive terms should be substituted with more appropriate denominations.
Anyway, whatever their future will be, at present eponyms are still largely used in medical language, as proved by dozens of new entries which can be daily found on the Internet. Given the rapid evolution of medical sciences, ever-updated and reliable electronic databases of medical eponyms are needed to help physicians and all health care professionals in both clinical practice and scientific writing.

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